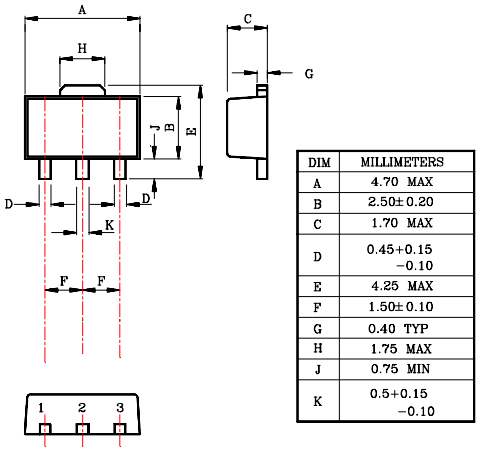
KTC4377

EPITAXIAL PLANAR NPN TRANSISTOR

STROBO FLASH APPLICATION.
HIGH CURRENT APPLICATION.

FEATURES

- High DC Current Gain and Excellent h_{FE} Linearity
  : $h_{FE}(1)$=140~600(V_{CE}=1V, I_C=0.5A)
  : $h_{FE}(2)$=70(Min.), 140(Typ.) (V_{CE}=1V, I_C=2A).
- Low Saturation Voltage
  : $V_{CE(sat)}$=0.5V(Max.) (I_C=2A, I_B=50mA).
- Small Flat Package.
- 1W (Mounted on Ceramic Substrate).



DIM	MILLIMETERS
A	4.70 MAX
B	2.50±0.20
C	1.70 MAX
D	0.45+0.15 −0.10
E	4.25 MAX
F	1.50±0.10
G	0.40 TYP
H	1.75 MAX
J	0.75 MIN
K	0.5+0.15 −0.10

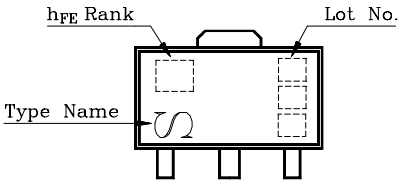
SOT-89

MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	30	V
Collector-Emitter Voltage		V_{CES}	30	V
		V_{CEO}	10	
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current	DC	I_C	2	A
	Pulse (Note 1)	I_{CP}	4	
Base Current	DC	I_B	0.4	A
	Pulse (Note 1)	I_{BP}	0.8	
Collector Power Dissipation		P_C	500	mW
		P_C*	1	W
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55~150	℃

Note 1 : Pulse Width≦10mS, Duty Cycle≦30%
P_C* : KTC4377 mounted on ceramic substrate ($250mm^2$x0.8t)

Marking

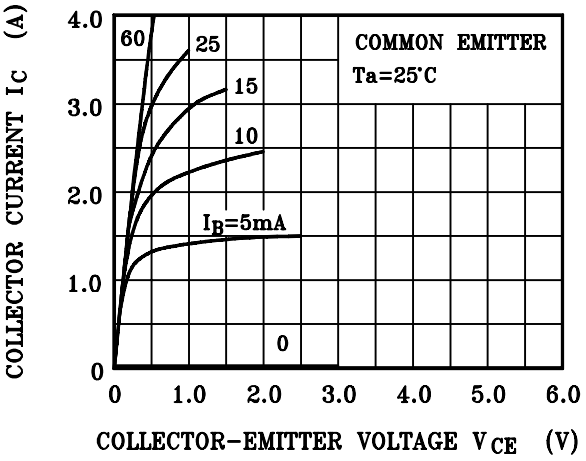


ELECTRICAL CHARACTERISTICS (Ta=25℃)

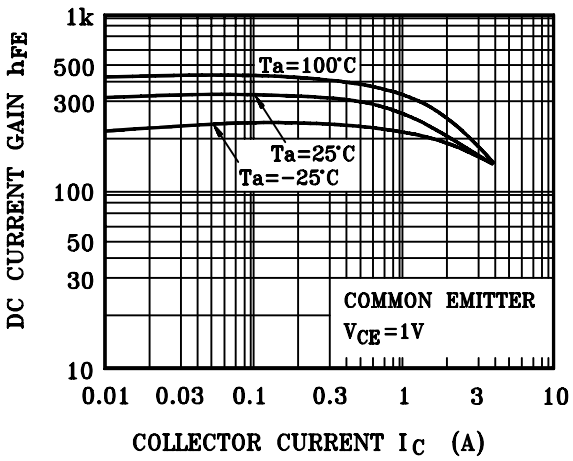
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=30V, I_E=0	-	-	100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=6V, I_C=0	-	-	100	nA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0	10	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=1mA, I_C=0	6	-	-	V
DC Current Gain	$h_{FE}(1)$ (Note 1)	V_{CE}=1V, I_C=0.5A	140	-	600	
	$h_{FE}(2)$	V_{CE}=1V, I_C=2A	70	140	-	
Collector-Emitter Saturation-Voltage	$V_{CE(sat)}$	I_C=2A, I_B=50mA	-	0.2	0.5	V
Base-Emitter Voltage	V_{BE}	V_{CE}=1V, I_C=2A	-	0.86	1.5	V
Transition Frequency	f_T	V_{CE}=1V, I_C=0.5A	-	150	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	27	-	pF

Note 1 : $h_{FE}(1)$ Classification A:140~240, B:200~330, C:300~450, D:420~600

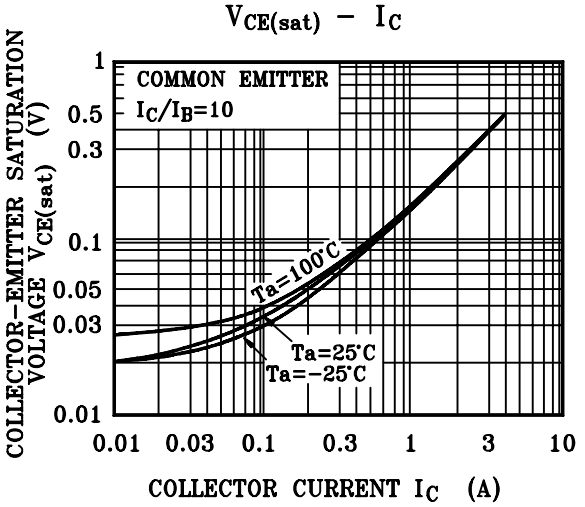
I_C – V_{CE}



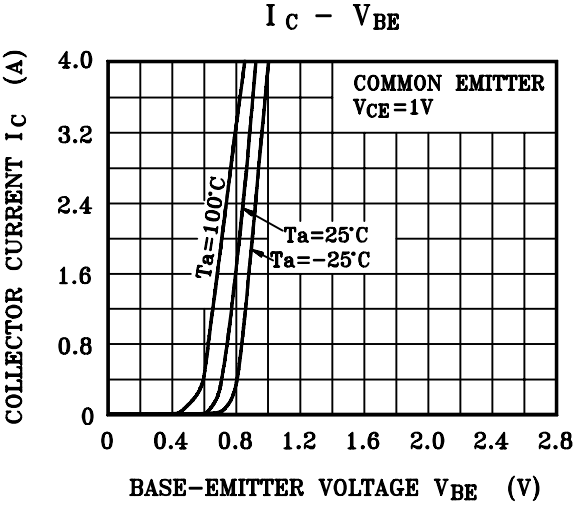
h_{FE} – I_C



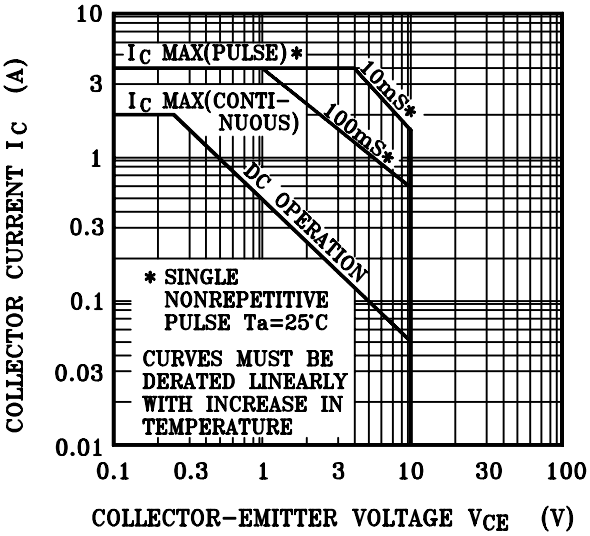
$V_{CE(sat)}$ – I_C



I_C – V_{BE}



SAFE OPERATING AREA



P_C – Ta